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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,011	01/16/2002	Lorin Ullmann	AUS920010750US1	6350

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EXAMINER
MITCHELL, JASON D

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 January 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-15_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to an application filed on 1/16/2002.

2.   Claims 1-15 are pending in this case.

Claim Objections

3.   Claims 14 and 15 are objected to because of the following informalities:

Claims 14 and 15 as written are each dependent upon themselves. For the

purposes of this action they will both be treated as dependent on claim 13.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent
> therefor, subject to the conditions and requirements of this title.

5.   **Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed**

invention is directed to non-statutory subject matter. Claim 1 recites a

method for marking a processing stack including assigning unique module ids

and pushing said ids onto a stack. But fails to provide a technological

embodiment (i.e. A computer readable medium as in claim 7) and therefore fails

to recite statutory subject matter. Further claims 2-6 fail to add any limitations

that provide a technological embodiment, therefore claims 2-6 are also rejected

as failing to recite statutory subject matter.

Claim Rej ctions - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   **Claims 1, 3, 7, and 9 are rejected under 35 U.S.C. 102(b) as being**

anticipated by US 5,950,003 to Kaneshiro et al. (Kaneshiro).

Regarding Claims 1 and 7: Kaneshiro discloses a method and computer

program product for marking a processing stack with signatures to indicate which

portions of the stack were utilized by which software code modules (col. 7, lines

55-57 'collects profile data at the procedure level'), said method comprising the

step of: assigning unique module identifier values to a plurality of code modules

(col. 18, lines 46-50 'a caller procedure ID'); and upon execution of said code

modules, pushing onto a processing stack said unique module identifiers within

stack frames allocated to said code modules (col. 18, lines 46-50 'caller-callee

information is pushed into the stack area').

Regarding Claims 3 and 9: The rejections of claims 1 and 7 are incorporated,

respectively; further, Kaneshiro discloses pushing onto said stack an entry/exit

indicator associated with said unique module identifier (col. 18, lines 46-50 'Upon

entering a procedure ... information is pushed into the stack area').

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

9.   **Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over US 5,950,003 to Kaneshiro et al. (Kaneshiro) in view of

US 5,191,534 to Orr et al. (Orr).

Regarding Claims 2 and 8: The rejections of claims 1 and 7 are incorporated,

respectively; further, Kaneshiro discloses pushing onto said processing stack

unique module identifier values (lines 46-50 'caller procedure ID'), but does not

explicitly address object instances.

Orr teaches generating an instance number for each instantiation of a code

module (col. 4, lines 40-43 'unique internal identifier for each instance of the

object') in an analogous art for the purpose of monitoring the object instance (col.

4, lines 44-45 'an internal attribute used for tracking').

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to use the ID taught in Orr (col. 4, lines 40-43) in conjunction with

the ID disclosed in Kaneshiro (lines 46-50) to identify the caller-callee pair,

because one of ordinary skill in the art would have been motivated to uniquely

identify the caller-callee pair in order to accurately retrieve profile data (col. 19,

lines 2-3 Profile data for procedures are collected and stored by the caller-callee

table').

10.   **Claims 4-6 and 10-15 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over US 5,950,003 to Kaneshiro et al. (Kaneshiro) in view of

US 6161219 to Ramkumar et al. (Ramkumar).

Regarding Claim 13: Kaneshiro discloses a system for inserting stack signature

marking code segments into application software modules in cooperation with a

compiler (col. 3, lines 53-55 'inserting profiling instrumentation codes during

compilation') and comprising: a control means operable by a user to indicate

whether or not to insert stack signature marking code segments into application

software modules (col. 8, lines 52-53 "'start log if" is used for starting profiling');

and a code insertion means which, responsive to the operation of the control

means, searches for entry points and exits points in application software modules

and inserts stack signature marking code segments following each entry point

and prior to each exit point into said application software modules (col. 13, lines

18-21 "'start profile" and "end profile" ... are inserted as the first and last

statements in the subroutine').

Ramkumar teaches insertion of instrumentation instructions prior to compilation

(col. 10, lines 35-37 'pre-compiler instruments the source program') in an

analogous art for the purpose of implementing 'portable checkpointing based on

source-to-source pre-compilation' (col. 10, lines 49-50).

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to insert the instrumentation instructions disclosed in Kaneshiro

(col. 3, lines 53-55 'inserting profiling instrumentation codes') prior to compilation

as taught in Ramkumar (col. 10, lines 35-37), if it was known that the code would

not be transformed, as disclosed in Kaneshiro (col. 3, lines 55-57 'mapping

between an original code and a transformed code'), because one of ordinary skill

in the art would have been motivated to make the instrumentation portable as

taught in Ramkumar (col. 10, lines 49-50).

Regarding Claims 4 and 10: The rejections of claims 1 and 7 are incorporated,

respectively; further Kaneshiro discloses inserting stack signature marking

software segments into application source code (col. 13, lines 18-21 "'start

profile" and "end profile" ... are inserted as the first and last statements in the

subroutine'), Kaneshiro does not disclose inserting the instrumentation codes

prior to complication, in order to map between original and transformed code (col.

3, lines 55-57 'mapping between an original code and a transformed code').

Ramkumar teaches insertion of instrumentation instructions prior to compilation

(col. 10, lines 35-37 'pre-compiler instruments the source program') in an

analogous art for the purpose of implementing 'portable checkpointing based on

source-to-source pre-compilation' (col. 10, lines 49-50).

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to insert the instrumentation instructions disclosed in Kaneshiro

(col. 3, lines 53-55 'inserting profiling instrumentation codes') prior to compilation

as taught in Ramkumar (col. 10, lines 35-37), if it was known that the code would

not be transformed, as disclosed in Kaneshiro (col. 3, lines 55-57 'mapping

between an original code and a transformed code'), because one of ordinary skill

in the art would have been motivated to make the instrumentation portable as

taught in Ramkumar (col. 10, lines 49-50).

Regarding Claims 5, 11 and 14: The rejections of claims 4, 10 and 13 are

incorporated, respectively; further Kaneshiro discloses providing a global control

(col. 8, Table 1 'start profile (name, record) ... Called at the beginning of the main

subroutine') which indicates all application source code modules are to have

stack signature marking software segments inserted into them during a given

compilation job (col. 3, lines 53-55 'inserting profiling instrumentation codes

during compilation').

Regarding Claims 6, 12 and 15: The rejections of claims 4, 10 and 13 are

incorporated, respectively; further Kaneshiro discloses providing a selective

control (col. 8, lines 51-52 "'start log if' is used for starting profiling') which

indicates only certain application source code modules are to have stack

signature marking software segments inserted into them during a given

compilation job (col. 3, lines 53-55 'inserting profiling instrumentation codes

during compilation').

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. US 5,628,016 to Kukol; US 5,774,729 to Carney et al.; US

6,002,872 to Alexander et al.; US 6,014,515 to Burch; US 6,119,206 to Tatkar et

al.; US 6,289,446 to Nilsson; US 6,293,712 to Coutant; US 6,311,325 to Levine

et al.; and US 6,314,558 to Angel et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Mitchell
12/21/04

TODD INGBERG
PRIMARY EXAMINER